

MILITARY SPECIFICATION SHEET

CABLE, RADIO FREQUENCY, FLEXIBLE COAXIAL, 75 OHMS, M17/62-RG144

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the cable described herein shall consist of this specification and the latest issue of MIL-C-17.

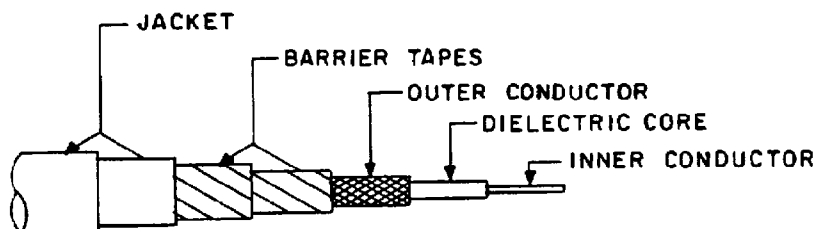


FIGURE 1. Configuration.

TABLE 1. Description.

Components	Construction details
Inner conductor	Seven strands of silver-coated, copper-covered, steel wire of .0175 inch each. Overall diameter: .0525 inch \pm .0010.
Dielectric core:	Type F-1: Solid extruded PTFE. Diameter: .285 inch \pm .005.
Outer conductor	Single braid of AWG no. 34 silver-coated copper wire. Diameter: .330 inch maximum. Coverage : 94.3% nominal Carriers : 24 Ends : 8 Picks/inch: 9.2 \pm 10%
Barrier tapes	Type FF-2: Two wraps of PTFE tape, .005 inch thick each, by 1-inch wide. Each wrap of PTFE tape is to be applied with a 50 percent minimum overlap.
Jacket	Type V. Double braid. Diameter: .410 inch \pm .010.

© denotes changes

ENGINEERING INFORMATION:

Continuous working voltage: 3,700 V rms, maximum.

Operating frequency: 3 GHz, maximum.

Velocity of propagation: 69.5 percent, nominal.

Power rating: See figure 2.

Operating temperature range: -55°C to 200°C.

Inner conductor properties:

DC resistance (maximum at 20°C): 1.39 ohms per 100 feet.

Elongation: 1 percent, minimum.

Tensile strength: 123 klbf/in², minimum.

Engineering note: This cable is useful in high temperature applications. (See connector series "N" and "SC" per MIL-C-39012, NATO preferred type NWR-16).

REQUIREMENTS:

Dimensions, configuration, and description: See figure 1 and table 1.

Environmental and mechanical:

Visual and mechanical examination: Applicable.

Out-of-roundness: Applicable.

Eccentricity: 10 percent, maximum.

Adhesion of conductors:

Inner conductor to core: 4 pounds, minimum; 18 pounds, maximum.

Aging stability: +250°C ±5°C.

Stress crack resistance: Not applicable.

Outer conductor integrity: Not applicable.

Ⓒ Cold bend: -55°C ±2°C.

Dimensional stability:

Inner conductor from core: 0.062 inch, maximum.

Inner conductor from jacket: .125 inch, maximum.

Contamination: Not applicable.

Bendability: Not applicable.

Flammability: Applicable.

Weight: 14 pounds per 100 feet, maximum.

Electrical:

Continuity: Applicable.

Spark test: Not applicable.

Voltage withstanding: 10,000 V rms, minimum.

Insulation resistance: 5,000 megohms, minimum.

Corona extinction voltage: 5,000 V rms, minimum.

Characteristic impedance: 75 ohms, ± 3 ohms.

Attenuation: 4.5 dB per 100 feet, maximum at 400 MHz; 18 dB per 100 feet maximum at 3 GHz.

Structural return loss: Not applicable.

© Capacitance: 22 pF per foot, maximum.

Capacitance stability: Not applicable.

Capacitance unbalance: Not applicable.

Transmission unbalance: Not applicable.

Mechanically induced noise voltage: Not applicable.

Time delay: Not applicable.

Part number: See table II.

Supersession data: See table II.

TABLE II. Cross reference of part number.

Part number	Superseded part number or type designation
M17/62-RG144	RG-144/U

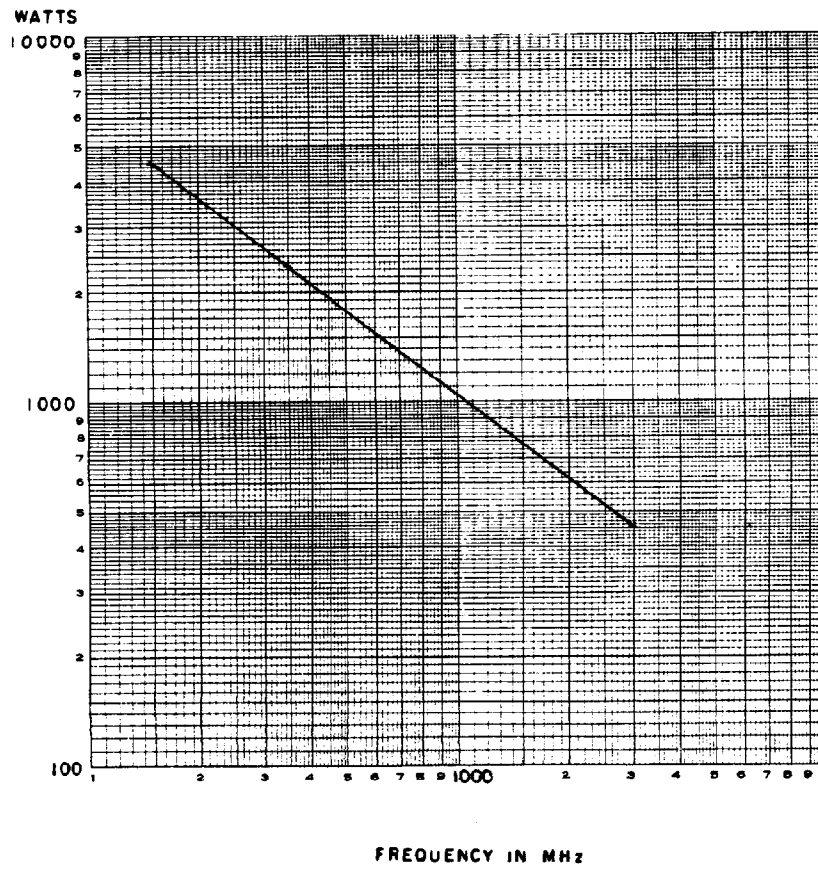


FIGURE 2. Power rating at 25°C sea level.

Custodians:

Army - CR
Navy - EC
Air Force - 85

Review activities:

Army - MI
Navy - SH
Air Force - 11, 17, 85, 99
DLA - ES, IS

User activities:

Army - AR, AT, ME
Navy - AS, MC, OS
Air Force - 19

Preparing activity:

Army - CR

Agent:

DLA - ES

(Project 6145-1031)